Remarks

Claims 1-20 are pending in the above-referenced application. Claims 1 and 11 are independent claims.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filling a response in the above identified application by three (3) months, and is accompanied by the requisite fees submitted electronically.

If there are any additional charges in connection with this response, the Commissioner is hereby authorized to charge the required fee to Deposit Account Number 50-1943.

Claim Rejections under 35 U.S.C. § 102

Claims 1-3, 6-7, 11-13 and 16-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,105,776 to Tsuchiya et al. (hereinafter "Tsuchiya") or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,216,480 to Camus et al. (hereinafter "Camus").

Tsuchiya describes a system for reducing engine idling vibration. Tsuchiya's system effectively monitors the idling speed of the engine and, if the speed starts to increase beyond a certain range, places a load on an alternator being run by the engine. The load takes the form of supplying current to a large capacitor. The capacitor continues to be charged in this manner until the engine speed is reduced to be within a certain range. The capacitor is used in this way until a storage threshold of the capacitor is approached, at which point the capacitor is discharged into a storage battery.

In contrast, applicants' claimed invention of claim 1, is a device to allow the efficient capture and accumulation of an intermittent, variable electricity supply, such as that typically

generated by a solar power supply. In applicants' claimed invention, a soft power storage system that has essentially no minimum threshold voltage for accumulating energy is used to store energy until the stored energy is at a sufficient voltage to be effectively transferred to a rechargeable battery. The transfer from soft power storage to the rechargeable battery may occur at a preset voltage that may be varied depending on the type and number of batteries being used. The rate of transfer may also be controlled to match the requirements of a particular battery chemistry and state of charging.

To emphasize the differences between the applicants' claimed invention and the cited prior art, claim 1 now reads, in relevant part:

> b) a first stage energy storage means suitable for capturing and accumulating the electrical energy from the source, said first energy storage means having essentially no minimum threshold voltage for accumulating energy;
>
> c) a second stage energy storage means, which is capable of receiving said electrical energy from said first stage energy storage means and storing said electrical energy for later use; and,
>
> d) an electronic means which senses and monitors a voltage of the energy accumulated in the first stage storage means and then activating a charge management electronics means when said voltage of said first stage storage exceeds a variable but preset voltage thereby efficiently charging the second stage energy storage means, and wherein said preset voltage conforms to a minimum threshold for activation of said second stage energy storage means and said charge management electronics means further controls the

charging current to conform to a variable but predetermined battery chemistry requirement of said second stage energy storage means.

Independent claim 11 contains similar language.

Tsuchiya does not teach, or make obvious, a charge management electronics means that has a variable preset voltage threshold related to an activation threshold of a second stage storage means. Nor does Tsuchiya teach, or make obvious, a charge management electronics that controls the charging current to conform to a variable, but predetermined, battery chemistry requirement of a second energy storage means. Tsuchiya does not, therefore, anticipate or make obvious applicants' claimed invention of claim 1 or 11. Applicants, therefore, request that this rejection be withdrawn and claims 1 and 11 be allowed.

As claims 2-10 and 12 -21 depend from, and include all the limitations of an allowable claim, applicants request that the rejection of them be withdrawn and that claims 2-10 and 12 -21 also be allowed.

Claim Rejections under 35 U.S.C. § 103

Claims 4 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,105,776 to Tsuchiya et al. (hereinafter "Tsuchiya") and U.S. Patent No. 6,216,480 to Camus et al. (hereinafter "Camus") as applied to claims 1 and 11 above, and further in view of U.S. Patent No. 5,994,789 to Ochiai et al. (hereinafter "Ochiai").

As claims 4 and 14 depend from, and include all the limitations of an allowable claim, applicants request that the rejection of them be withdrawn and that claims 2-10 and 12 -21 also be allowed.

CONCLUSION

In view of the above claim amendments and remarks, this application is now believed to be in condition for allowance. Reconsideration is, therefore, respectfully requested. However, the Examiner is requested to telephone the undersigned if there are any remaining issues in this application to be resolved.

A petition for a three-month extension is being filed concurrently herewith. Finally, if there are any additional charges in connection with this response, the Commissioner is authorized hereby to charge the required fee to Deposit Account Number 50-1943.

Respectfully submitted,

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